

REMARKS

Applicants respectfully traverse and request reconsideration.

Applicants wish to thank the Examiner for the notice that claim 18 is allowed and that claims 4-6 and 13-15 would be allowable if written in independent form.

Claims 1-3, 7-12, 16-17 and 20-21 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Chang et al. in view of Watanabe et al. This is a new ground of rejection. The office action admits that Chang fails to teach, among other things, filling only pixels in the portion of a primitive that is inside a screen region as set forth, for example, in claims 1-2, 9 and 20. Watanabe is allegedly cited as teaching this missing element and in FIG. 1 and apparently FIG. 9 of Watanabe. The office action states that “Watanabe teaches filling only pixels in the portion of a primitive as inside the screen region” citing S10, S8, S22 and S24 and FIGS. 1, 2 and 9. However, Applicants respectfully submit that upon closer reading of the Watanabe reference, Watanabe fails to teach the claimed subject matter. For example, in paragraph 8, Watanabe describes prior art that is known which rasterizes objects on a per object basis and not on a partial object basis as claimed. For example, the statement “After clipping is performed on all the objects in this manner, rasterizing is performed on the objects included, in whole or in part, in the view volume...” refers to rasterizing of objects part of which is in a view volume, but the entire object is nonetheless rasterized or rendered. As the statement indicates, if an object is in part in the view volume, then it is rasterized. These are well known techniques wherein even if a portion of an object is found to be in a view volume, the entire object is rasterized or rendered as taught by Watanabe. This per object rendering is what Applicants described in their Background of the Invention on page 3, where for example Applicants state “However, if a primitive lies only partially within the screen area, to assign all the pixels a particular value and then to discard the portion of the primitive lying outside the screen area requires large amounts of computer processing time and is

inefficient.” As such, it is known to fill all primitives even for pixels that are outside but lie partially within the screen area. It is also known to, for example, fill in primitives even for pixels that are outside a scissor plane as also noted in Applicants’ Background of the Invention section. As such, Watanabe merely teaches a prior art system as known which will render on a per object basis, objects even if only a portion of the object lies in a view volume. Applicants claim a different approach.

In contrast to Watanabe for example, Applicants instead claim, among other things, filling at least a portion of a primitive that lies inside the screen region and filling only pixels in the portion of the primitive that lie inside the screen region. Pixels of the primitive that lie outside the region are not filled in, unlike the technique taught in Watanabe. Other advantages will be recognized by those of ordinary skill in the art. As such, Applicants respectfully submit that these claims are in condition for allowance.

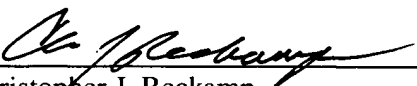
Regarding claims 10-12 and 16-17, Applicants respectfully reassert the relevant remarks made above and as such, these claims are also in condition for allowance.

Also, the dependent claims add additional novel and non-obvious subject matter.

Applicants respectfully submit that the claims are in condition for allowance and that a timely Notice of Allowance be issued in this case. The Examiner is invited to contact the below-listed attorney if the Examiner believes that a telephone conference will advance the prosecution of this application.

Respectfully submitted,

Dated: 11/17/05

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